

<p align="center">TEST REPORT</p> <p align="center">EN 60950-1:2006</p> <p align="center">Safety of information technology equipment</p> <p align="center">Part 1-General requirements</p>	
Report reference No	RSZ09111604-3
Compiled by (+ signature)	Jerry Cheng 
Approved by (+ signature)	Safety Engineer: Jeanne Han 
Date of issue	2009-12-01
Testing laboratory	Bay Area Compliance Laboratories Corp. (Shenzhen)
Address	6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone, ShenZhen, Guangdong, P.R.China
Testing location	As above
Applicant1	Xingtel Xiamen Electronics Co., Ltd.
Address	Xingtel Building, Chuangxin Rd, Torch Hi-tech Ind. District Xiamen 361006, PR China
Applicant2	---
Address	---
Standard	EN 60950-1:2006
Test sample(s) received.....	2009-11-22
Test in period.....	2009-11-22To 2009-11-30
Procedure deviation	N.A.
Non-standard test method	N.A.
<p>This test report is for the customer shown above and their specific product only. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Shenzhen). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.</p>	
Type of test object	Corded Phone
Trademark	Xingtel;TTEC PLUS
Model/type reference	XL-2029IDM;TK4060
Manufacturer.....	Xingtel Xiamen Electronics Co., Ltd.
Rating	Base unit:Connected to TNV-3 circuit and built in 4×1.5V AA size non-rechargeable batteries

Copy of marking plate:

1. Corded Phone marking:

Corded Phone
Model: XL-2029IDM
Rating for Base unit: Connected to TNV-3 circuit and built in 4 × 1.5V AA size non-rechargeable batteries
Serial No.:xxxxx

Xingtel



Xingtel Xiamen Electronics Co., Ltd.

Made in China

Note:

Corded Phone model no. TK4060 belong to TESAN ILETISIM A.S. with the trade name is TTEC PLUS, it is exactly same with the model no. XL-2029IDM with the trade name is Xingtel, and belong to Xingtel. These two models are electrically and mechanically identical, The only difference between them is the model no and trademark!

Test item particulars.....:See General Product Information	
Equipment mobility	Stationary
Connection to the mains.....	No direct connection to mains but direct connection to TNV-3 circuit
Operating condition	Continuous operating
Mains supply tolerance (%)	N/A
Class of equipment	Class III equipment (supplied by SELV)
Laser of Classification	LED indicator CLASS 1 laser equipment
Max. Specified ambient temperature()	50 in the appendix-LCD spec
Mass of equipment (kg).....	Approx 0.14kg for Base,0.10kg for handset (without batteries)
Pollution degree	Pollution degree 2
IP protection class	IPX0

Possible test case verdicts:

- test case does not apply to the test object.....:N(.A.)
- test object does meet the requirement.....P(ass)
- test object does not meet the requirement.....F(ail)

General remarks:

”(see remark #)” refers to a remark appended to the report.

(see appended table)” refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

The test results presented in this report relate only to the object tested.

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General product information:

1) Description of the product

The product tested with model name XL-2029IDM or TK4060 is Corded Phone
, for indoor use only.

Base unit: Connected to TNV-3 circuit and built in 4×1.5V AA size non-rechargeable batteries

1.1 The EUT consists of

-Base unit with RJ11 ports connected to TNV-3 circuit built in 4×1.5V AA size non-rechargeable batteries

Certification see appended table 1.5.1

2) Factory information:

Factory: Xingtel Xiamen Electronics Co., Ltd.

Address: Xingtel Building, Chuangxin Rd, Torch Hi-tech Ind. District Xiamen 361006, PR China

3) Manufacturer's name or trade-mark of identification mark:

Manufacturer's name: Xingtel Xiamen Electronics Co., Ltd.

Trade-mark: Xingtel;TTEC PLUS

EN 60950-1:2006			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General		P
	Comply with IEC60950 or relevant component standard	Components that were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	<p>Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this Standard.</p> <p>Components not certified are used in accordance with their ratings and they comply with IEC60950 and the relevant component Standard.</p> <p>Components, for which no relevant IEC Standard exist, have been tested under the condition occurring in the equipment, using applicable parts of IEC60950.</p>	P
1.5.3	Thermal controls	No thermal controls	N
1.5.4	Transformers	Evaluated in approved adapter	N
1.5.5	Interconnecting cables	Comply with relevant requirements of this standard	P
1.5.6	Capacitors bridging insulation	Class III equipment. Evaluated in approved adapter	N
1.5.7	Resistors bridging insulation	Class III equipment.	N
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	Not used.	N
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	Not used.	N
1.5.8	Components in equipment for IT power systems	Not intend for IT power distribution systems.	N

EN 60950-1:2006			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9	Surge suppressors	A electric discharging tube RV1 at secondary circuit(see appendix C- electric discharging tube spec)	P
1.5.9.1	General		P
1.5.9.2	Protection of VDRs		N
1.5.9.3	Bridging of functional insulation by a VDR		N
1.5.9.4	Bridging of basic insulation by a VDR		N
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N
1.6	Power interface		P
1.6.1	AC power distribution systems		N
1.6.2	Input current		N
1.6.3	Voltage limit of hand-held equipment	The rated voltage of hand-held equipment not exceed 250V.	P
1.6.4	Neutral conductor	Class III equipment.	N
1.7	Marking and instructions		P
1.7.1	Power rating		P
	Rated voltage(s) or voltage range(s) (V)	DC6V(base unit built in 4×1.2Vd.c. AA size non-rechargeable batteries)	P
	Symbol for nature of supply, for d.c. only.....	---	P
	Rated frequency or rated frequency range (Hz) ...:		N
	Rated current (mA or A)		N
	Manufacturer's name or trade-mark or identification mark	Xingtel Xiamen Electronics Co., Ltd.	P
	Model identification or type reference	Xingtel for model: XL-2029IDM; TTEC PLUS for model: TK4060	P
	Symbol for Class II equipment only	Class III equipment	N
	Other markings and symbols	CE	P
1.7.2	Safety instructions and marking	Operating/safety instructions made available to the user.	P
1.7.2.1	General		N
1.7.2.2	Disconnect devices		N
1.7.2.3	Overcurrent protective device		N
1.7.2.4	IT power distribution systems		N
1.7.2.5	Operator access with a tool		N
1.2.7.6	Ozone		N

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Clause	Requirement + Test	Result - Remark	Verdict
1.7.3	Short duty cycles	Continuous operation.	N
1.7.4	Supply voltage adjustment		N
	Methods and means of adjustment; reference to installation instructions		N
1.7.5	Power outlets on the equipment	No standard power outlet.	N
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N
1.7.7	Wiring terminals		N
1.7.7.1	Protective earthing and bonding terminals	No protective earthing and bonding terminals	N
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment not for permanent connection or provided with a non-detachable power supply cord	N
1.7.7.3	Terminals for d.c. mains supply conductors	The equipment not intended to be connected to DC mains	N
1.7.8	Controls and indicators	LED indicators provided, but do not affect safety.	P
1.7.8.1	Identification, location and marking	Such marking do not affect safety.	N
1.7.8.2	Colours	Safety is not involved	N
1.7.8.3	Symbols according to IEC 60417		N
1.7.8.4	Markings using figures	No such markings	N
1.7.9	Isolation of multiple power sources	Single DC source input.	N
1.7.10	Thermostats and other regulating devices	No thermostats or other regulating devices	N
1.7.11	Durability	Rubbed with a cloth soaked with water for 15s then again for 15s with cloth soaked with petroleum spirit, after this test, the marking on the label did not fade. There are no curling nor lifting of the label edge.	P
1.7.12	Removable parts	No such parts	N

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Clause	Requirement + Test	Result - Remark	Verdict
1.7.13	Replaceable batteries	The require warning marking is both in operation and service manuals, such as: CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE DISPOSE OF USED BATTERY ACCORDING TO THE INSTRUCTION or equivalent	N
	Language(s)	Enginsh	—
1.7.14	Equipment for restricted access locations		N
2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	Protection by enclosure, no hazardous areas to access.	P
2.1.1.1	Access to energized parts		P
	Test by inspection	Inspected and as below.	P
	Test with test finger (Figure 2A)		P
	Test with test pin (Figure 2B)	The test pin was unable to access TNV bare parts of connectors.	P
	Test with test probe (Figure 2C)		N
2.1.1.2	Battery compartments		P
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area	N
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area	N
2.1.1.5	Energy hazards	No energy hazard present.	N
2.1.1.6	Manual controls	None	N
2.1.1.7	Discharge of capacitors in equipment	Class III equipment	N
	Measured voltage (V); time-constant (s)		—
2.1.1.8	Energy hazards – d.c. mains supply	Not supplied by DC mains supply	N
	a) Capacitor connected to the d.c. mains supply ...		N
	b) Internal battery connected to the d.c. mains supply		N
2.1.1.9	Audio amplifiers	No audio amplifiers	N

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Clause	Requirement + Test	Result - Remark	Verdict
2.1.2	Protection in service access areas	No bare parts operating at HAZARDOUS VOLTAGES in a service access area.	P
2.1.3	Protection in restricted access locations	Equipment not intended for installation in restricted access locations	N

2.2	SELV circuits		P
2.2.1	General requirements	equipment supplied by SELV source.	P
2.2.2	Voltages under normal conditions (V)	Not exceed SELV limit	P
2.2.3	Voltages under fault conditions (V)	Not exceed SELV limit	P
2.2.4	Connection of SELV circuits to other circuits		P

2.3	TNV circuits		P
2.3.1	Limits	Complies by inspection based on review of circuit voltages.	P
	Type of TNV circuits	TNV-3 circuit	—
2.3.2	Separation from other circuits and from accessible parts	Protected by enclosure	P
2.3.2.1	General requirements		P
2.3.2.2	Protection by basic insulation		P
2.3.2.3	Protection by earthing		N
2.3.2.4	Protection by other constructions		N
2.3.3	Separation from hazardous voltages		P
	Insulation employed	Basic insulation	—
2.3.4	Connection of TNV circuits to other circuits		P
	Insulation employed	Function insulation.	—
2.3.5	Test for operating voltages generated externally		N

2.4	Limited current circuits		N
2.4.1	General requirements	No such circuits	N
2.4.2	Limit values		N
	Frequency (Hz).....		—
	Measured current (mA)		—
	Measured voltage (V)		—
	Measured circuit capacitance (nF or μ F)		—
2.4.3	Connection of limited current circuits to other circuits		N

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Clause	Requirement + Test	Result - Remark	Verdict
2.5	Limited power sources		N
	a) Inherently limited output	4 x 1.5V AA non-rechargeable batteries Used in base	N
	b) Impedance limited output		N
	c) Regulating network limited output under normal operating and single fault condition		P
	d) Overcurrent protective device limited output		N
	Max. output voltage (V), max. output current (A), max. apparent power (VA)		—
	Current rating of overcurrent protective device (A)		—
2.6	Provisions for earthing and bonding		N
2.6.1	Protective earthing	Class III equipment.	N
2.6.2	Functional earthing		N
2.6.3	Protective earthing and protective bonding conductors		N
2.6.3.1	General		N
2.6.3.2	Size of protective earthing conductors		N
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors		N
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)		N
2.6.3.5	Colour of insulation.....		N
2.6.4	Terminals		N
2.6.4.1	General		N
2.6.4.2	Protective earthing and bonding terminals		N
	Rated current (A), type, nominal thread diameter (mm)		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N
2.6.5	Integrity of protective earthing		N
2.6.5.1	Interconnection of equipment		N
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N
2.6.5.3	Disconnection of protective earth		N
2.6.5.4	Parts that can be removed by an operator		N
2.6.5.5	Parts removed during servicing		N
2.6.5.6	Corrosion resistance		N

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.7	Screws for protective bonding		N
2.6.5.8	Reliance on telecommunication network or cable distribution system		N
2.7	Overcurrent and earth fault protection in primary circuits		N
2.7.1	Basic requirements	Class III equipment	N
	Instructions when protection relies on building installation		N
2.7.2	Faults not simulated in 5.3.7		N
2.7.3	Short-circuit backup protection		N
2.7.4	Number and location of protective devices		N
2.7.5	Protection by several devices		N
2.7.6	Warning to service personnel.....		N
2.8	Safety interlocks		N
2.8.1	General principles	No safety interlocks	N
2.8.2	Protection requirements		N
2.8.3	Inadvertent reactivation		N
2.8.4	Fail-safe operation		N
2.8.5	Moving parts		N
2.8.6	Overriding		N
2.8.7	Switches and relays		N
2.8.7.1	Contact gaps (mm)		N
2.8.7.2	Overload test		N
2.8.7.3	Endurance test		N
2.8.7.4	Electric strength test		N
2.8.8	Mechanical actuators		N
2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic material not used	P
2.9.2	Humidity conditioning		N
	Relative humidity (%), temperature (°C)		—
2.9.3	Grade of insulation	Basic insulation	P
2.9.4	Separation from hazardous voltages	Have evaluated in approved adapter.	P
	Method(s) used	By reinforced insulation	—
2.10	Clearances, creepage distances and distances through insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.1	General	See 2.10.3,2.10.4,2.10.5	P
2.10.1.1	Frequency		P
2.10.1.2	Pollution degrees	Pollution degree 2	P
2.10.1.3	Reduced values for functional insulation		N
2.10.1.4	Intervening unconnected conductive parts		N
2.10.1.5	Insulation with varying dimensions		N
2.10.1.6	Special separation requirements	See clause 6.1.2 & 6.2.1 requirement.	P
2.10.1.7	Insulation in circuits generating starting pulses		N
2.10.2	Determination of working voltage	120V d.c for TNV-3 circuit	P
2.10.2.1	General		N
2.10.2.2	RMS working voltage		N
2.10.2.3	Peak working voltage		N
2.10.3	Clearances		P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages	1500V peak for TNV-3 circuit	P
	a) AC mains supply		N
	b) Earthed d.c. mains supplies		N
	c) Unearthed d.c. mains supplies		N
	d) Battery operation		N
2.10.3.3	Clearances in primary circuits		N
2.10.3.4	Clearances in secondary circuits	Basic insulation employed between TNV-3 circuit and accessible parts Functional insulation complied with 5.3.4 C	P
2.10.3.5	Clearances in circuits having starting pulses		N
2.10.3.6	Transients from a.c. mains supply		N
2.10.3.7	Transients from d.c. mains supply		N
2.10.3.8	Transients from telecommunication networks and cable distribution systems	1500V peak	P
2.10.3.9	Measurement of transient voltage levels		N
	a) Transients from a mains supply		N
	For an a.c. mains supply		N
	For a d.c. mains supply		N
	b) Transients from a telecommunication network :		N
2.10.4	Creepage distances	Complied with table 2L.	P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P

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Clause	Requirement + Test	Result - Remark	Verdict
	CTI tests	Material group IIIb is assumed to be used	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation	Only basic insulation employed between TNV-3 circuit and accessible parts	N
2.10.5.1	General		P
2.10.5.2	Distances through insulation		N
2.10.5.3	Insulating compound as solid insulation		N
2.10.5.4	Semiconductor devices		N
2.10.5.5	Cemented joints		N
2.10.5.6	Thin sheet material – General		N
2.10.5.7	Separable thin sheet material		N
	Number of layers (pcs)		—
2.10.5.8	Non-separable thin sheet material		N
2.10.5.9	Thin sheet material – standard test procedure		N
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		N
	Electric strength test		—
2.10.5.11	Insulation in wound components		N
2.10.5.12	Wire in wound components		N
	Working voltage		N
	a) Basic insulation not under stress		N
	b) Basic, supplementary, reinforced insulation		N
	c) Compliance with Annex U		N
	Two wires in contact inside wound component; angle between 45° and 90°		N
2.10.5.13	Wire with solvent-based enamel in wound components		N
	Electric strength test		—
	Routine test		N
2.10.5.14	Additional insulation in wound components		N
	Working voltage		N
	- Basic insulation not under stress		N
	- Supplementary, reinforced insulation		N
2.10.6	Construction of printed boards		N
2.10.6.1	Uncoated printed boards		N
2.10.6.2	Coated printed boards		N

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N
2.10.6.4	Insulation between conductors on different layers of a printed board		N
	Distance through insulation		N
	Number of insulation layers (pcs).....:		N
2.10.7	Component external terminations		N
2.10.8	Tests on coated printed boards and coated components		N
2.10.8.1	Sample preparation and preliminary inspection		N
2.10.8.2	Thermal conditioning		N
2.10.8.3	Electric strength test		N
2.10.8.4	Abrasion resistance test		N
2.10.9	Thermal cycling		N
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N
2.10.11	Tests for semiconductor devices and cemented joints		N
2.10.12	Enclosed and sealed parts		N
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	All the interconnecting cable are adequate for the current they are intended to carry.	P
3.1.2	Protection against mechanical damage	Wireways are smooth and free from sharp edges	P
3.1.3	Securing of internal wiring	The wires are positioned in such a manner that prevents excessive strain, loosening of terminal connections and damage of conductor insulation.	P
3.1.4	Insulation of conductors		P
3.1.5	Beads and ceramic insulators	Equipment does not have any beads or similar insulators.	N
3.1.6	Screws for electrical contact pressure	No screws for electrical contact pressure	N
3.1.7	Insulating materials in electrical connections	No insulating materials in electrical connections	N
3.1.8	Self-tapping and spaced thread screws	No self-tapping and spaced thread screws for the connection of current-carrying	N
3.1.9	Termination of conductors		P

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Clause	Requirement + Test	Result - Remark	Verdict

	10 N pull test	No hazard.	P
3.1.10	Sleeving on wiring	No sleeving	N

3.2	Connection to a mains supply		N
3.2.1	Means of connection	Class III equipment	N
3.2.1.1	Connection to an a.c. mains supply		N
3.2.1.2	Connection to a d.c. mains supply		N
3.2.2	Multiple supply connections		N
3.2.3	Permanently connected equipment		N
	Number of conductors, diameter of cable and conduits (mm)		—
3.2.4	Appliance inlets		N
3.2.5	Power supply cords		N
3.2.5.1	AC power supply cords		N
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords		N
3.2.6	Cord anchorages and strain relief		N
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
3.2.7	Protection against mechanical damage		N
3.2.8	Cord guards		N
	Diameter or minor dimension D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		N

3.3	Wiring terminals for connection of external conductors		N
3.3.1	Wiring terminals	Class III equipment	N
3.3.2	Connection of non-detachable power supply cords		N
3.3.3	Screw terminals		N
3.3.4	Conductor sizes to be connected		N
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		—
3.3.5	Wiring terminal sizes		N
	Rated current (A), type, nominal thread diameter (mm)		—
3.3.6	Wiring terminal design		N

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Clause	Requirement + Test	Result - Remark	Verdict
3.3.7	Grouping of wiring terminals		N
3.3.8	Stranded wire		N
3.4	Disconnection from the mains supply		N
3.4.1	General requirement	Class III equipment	N
3.4.2	Disconnect devices		N
3.4.3	Permanently connected equipment		N
3.4.4	Parts which remain energized		N
3.4.5	Switches in flexible cords		N
3.4.6	Number of poles - single-phase and d.c. equipment		N
3.4.7	Number of poles - three-phase equipment		N
3.4.8	Switches as disconnect devices		N
3.4.9	Plugs as disconnect devices		N
3.4.10	Interconnected equipment		N
3.4.11	Multiple power sources		N
3.5	Interconnection of equipment		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits	SELV TO SELV AND TNV-3 TO TNV-3 ONLY	P
3.5.3	ELV circuits as interconnection circuits		N
3.5.4	Data ports for additional equipment	No such data ports	N
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N
	Angle of 10°	Equipment with mass not exceeding 7kg and nor a floor-standing	N
	Test force (N)		N
4.2	Mechanical strength		P
4.2.1	General		P
4.2.2	Steady force test, 10 N		P
4.2.3	Steady force test, 30 N	No internal enclosure.	N
4.2.4	Steady force test, 250 N	Applied for top, side,bottom of base.No hazard	P
4.2.5	Impact test	The handset is a hand-help equipment and subjected to drop test,see 4.2.6	N
	Fall test		N

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Clause	Requirement + Test	Result - Remark	Verdict
	Swing test		N
4.2.6	Drop test; height (mm)	750mm applied to base and 1000mm for handset; three times on different direction, no hazards as a result of test	P
4.2.7	Stress relief test	No shrinkage and distortion due to 70 °C / 7h stress relief test	P
4.2.8	Cathode ray tubes	No Cathode ray tubes	N
	Picture tube separately certified		N
4.2.9	High pressure lamps	No high pressure lamps	N
4.2.10	Wall or ceiling mounted equipment; force (N)	A 50N force is applied downwards through the centre of gravity of the equipment, for 1 min. The base and its associated mounting means is remain secure during the test. After the test, the base and associated mounting plate are not be damaged.	N
4.3	Design and construction		P
4.3.1	Edges and corners	All corners are smooth and rounded	P
4.3.2	Handles and manual controls; force (N)		N
4.3.3	Adjustable controls		N
4.3.4	Securing of parts		N
4.3.5	Connection by plugs and sockets		P
4.3.6	Direct plug-in equipment		N
	Torque		—
	Compliance with the relevant mains plug standard		N
4.3.7	Heating elements in earthed equipment	No heating elements	N
4.3.8	Batteries		P
	- Overcharging of a rechargeable battery		P
	- Unintentional charging of a non-rechargeable battery	No Unintentional charging for batteries	N
	- Reverse charging of a rechargeable battery		N
	- Excessive discharging rate for any battery		N
4.3.9	Oil and grease	No oil and grease	N
4.3.10	Dust, powders, liquids and gases		N
4.3.11	Containers for liquids or gases		N
4.3.12	Flammable liquids		N

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Clause	Requirement + Test	Result - Remark	Verdict
	Quantity of liquid (l)		N
	Flash point (°C)		N
4.3.13	Radiation		N
4.3.13.1	General		N
4.3.13.2	Ionizing radiation		N
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N
	Part, property, retention after test, flammability classification		N
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N
4.3.13.5	Laser (including LEDs)		N
	Laser class		N
4.3.13.6	Other types		N
4.4	Protection against hazardous moving parts		N
4.4.1	General	No moving parts	N
4.4.2	Protection in operator access areas		N
4.4.3	Protection in restricted access locations		N
4.4.4	Protection in service access areas		N
4.5	Thermal requirements		P
4.5.1	General	(See appended table 4.5)	P
4.5.2	Temperature tests		P
	Normal load condition per Annex L		—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat		N
4.6	Openings in enclosures		P
4.6.1	Top and side openings	openings are on the above of the speaker ,speaker is at the SELV circuit	P
	Dimensions (mm)		—
4.6.2	Bottoms of fire enclosures		N
	Construction of the bottommm, dimensions (mm) . :		—
4.6.3	Doors or covers in fire enclosures		N

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Clause	Requirement + Test	Result - Remark	Verdict
4.6.4	Openings in transportable equipment		N
4.6.4.1	Constructional design measures		N
	Dimensions (mm) :		—
4.6.4.2	Evaluation measures for larger openings		N
4.6.4.3	Use of metallized parts		N
4.6.5	Adhesives for constructional purposes		N
	Conditioning temperature (°C), time (weeks) :		—

4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Method 1 used.	P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N
4.7.2	Conditions for a fire enclosure	All the components mounted on rated V-1 PCB and supplied by an approved adapter	P
4.7.2.1	Parts requiring a fire enclosure	See above	N
4.7.2.2	Parts not requiring a fire enclosure		P
4.7.3	Materials	PCB rated V-1 or enclosure rated min. HB	P
4.7.3.1	General		P
4.7.3.2	Materials for fire enclosures		N
4.7.3.3	Materials for components and other parts outside fire enclosures	See appended table 1.5.1	P
4.7.3.4	Materials for components and other parts inside fire enclosures		N
4.7.3.5	Materials for air filter assemblies		N
4.7.3.6	Materials used in high-voltage components		N

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		N
5.1.1	General		N
5.1.2	Configuration of equipment under test (EUT)		N
5.1.2.1	Single connection to an a.c. mains supply		N
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N
5.1.3	Test circuit		N

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.4	Application of measuring instrument		N
5.1.5	Test procedure		N
5.1.6	Test measurements		N
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA)....		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N
5.1.7.1	General		N
5.1.7.2	Simultaneous multiple connections to the supply		N
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	See below	P
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	Class III Equipment built in 4×1.5V non-rechargeable batteries	N
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
5.1.8.2	Summation of touch currents from telecommunication networks		P
	a) EUT with earthed telecommunication ports		N
	b) EUT whose telecommunication ports have no reference to protective earth		P
5.2	Electric strength		P
5.2.1	General		P
5.2.2	Test procedure	See appended table 5.2	P
5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation		P
5.3.2	Motors	No motors	N
5.3.3	Transformers	No transformer	N
5.3.4	Functional insulation.....	Functional insulation complies with the requirements (c).	P
5.3.5	Electromechanical components		N
5.3.6	Audio amplifiers in ITE	No audio amplifiers	N
5.3.7	Simulation of faults	(see appended table 5.3)	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.8	Unattended equipment		N
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests		P
5.3.9.2	After the tests		P

6	CONNECTION TO TELECOMMUNICATION NETWORKS		P
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		P
6.1.1	Protection from hazardous voltages		P
6.1.2	Separation of the telecommunication network from earth		N
6.1.2.1	Requirements		N
	Supply voltage (V)		—
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		N

6.2	Protection of equipment users from overvoltages on telecommunication networks		P
6.2.1	Separation requirements	Basic insulation	P
6.2.2	Electric strength test procedure		P
6.2.2.1	Impulse test		N
6.2.2.2	Steady-state test	(see appended table 5.2)	P
6.2.2.3	Compliance criteria	No breakdown of insulation.	P

6.3	Protection of the telecommunication wiring system from overheating		N
	Max. output current (A)		—
	Current limiting method		—

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N
7.1	General		N
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N
7.3	Protection of equipment users from overvoltages on the cable distribution system		N
7.4	Insulation between primary circuits and cable distribution systems		N
7.4.1	General		N
7.4.2	Voltage surge test		N
7.4.3	Impulse test		N

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Clause	Requirement + Test	Result - Remark	Verdict

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N
A.1.1	Samples		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N
A.1.3	Mounting of samples		N
A.1.4	Test flame (see IEC 60695-11-3)		N
	Flame A, B, C or D		—
A.1.5	Test procedure		N
A.1.6	Compliance criteria		N
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N
A.2.1	Samples, material		—
	Wall thickness (mm)		—
A.2.2	Conditioning of samples; temperature (°C)		N
A.2.3	Mounting of samples		N
A.2.4	Test flame (see IEC 60695-11-4)		N
	Flame A, B or C		—
A.2.5	Test procedure		N
A.2.6	Compliance criteria		N
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N
A.3.1	Mounting of samples		N
A.3.2	Test procedure		N
A.3.3	Compliance criterion		N

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Clause	Requirement + Test	Result - Remark	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N
B.1	General requirements		N
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N
B.3	Maximum temperatures		N
B.4	Running overload test		N
B.5	Locked-rotor overload test		N
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N
B.6.1	General		N
B.6.2	Test procedure		N
B.6.3	Alternative test procedure		N
B.6.4	Electric strength test; test voltage (V)		N
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N
B.7.1	General		N
B.7.2	Test procedure		N
B.7.3	Alternative test procedure		N
B.7.4	Electric strength test; test voltage (V)		N
B.8	Test for motors with capacitors	(see appended table 5.3)	N
B.9	Test for three-phase motors	(see appended table 5.3)	N
B.10	Test for series motors		N
	Operating voltage (V)		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
	Method of protection		—
C.1	Overload test		N
C.2	Insulation		N
	Protection from displacement of windings		N

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Clause	Requirement + Test	Result - Remark	Verdict

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument		P
D.2	Alternative measuring instrument		N

E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N
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F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
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G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N
G.1	Clearances		N
G.1.1	General		N
G.1.2	Summary of the procedure for determining minimum clearances		N
G.2	Determination of mains transient voltage (V)		N
G.2.1	AC mains supply		N
G.2.2	Earthed d.c. mains supplies		N
G.2.3	Unearthed d.c. mains supplies		N
G.2.4	Battery operation		N
G.3	Determination of telecommunication network transient voltage (V)		N
G.4	Determination of required withstand voltage (V)		N
G.4.1	Mains transients and internal repetitive peaks		N
G.4.2	Transients from telecommunication networks		N
G.4.3	Combination of transients		N
G.4.4	Transients from cable distribution systems		N
G.5	Measurement of transient voltages (V)		N
	a) Transients from a mains supply		N
	For an a.c. mains supply		N
	For a d.c. mains supply		N
	b) Transients from a telecommunication network		N
G.6	Determination of minimum clearances		N

H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N
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J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N
	Metal(s) used		—

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Clause	Requirement + Test	Result - Remark	Verdict

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N
K.1	Making and breaking capacity		N
K.2	Thermostat reliability; operating voltage (V) :		N
K.3	Thermostat endurance test; operating voltage (V) :		N
K.4	Temperature limiter endurance; operating voltage (V) :		N
K.5	Thermal cut-out reliability		N
K.6	Stability of operation	(see appended table 5.3)	N

L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N
L.2	Adding machines and cash registers		N
L.3	Erasers		N
L.4	Pencil sharpeners		N
L.5	Duplicators and copy machines		N
L.6	Motor-operated files		N
L.7	Other business equipment	Corded Phone	P

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N
M.1	Introduction		N
M.2	Method A		N
M.3	Method B		N
M.3.1	Ringing signal		N
M.3.1.1	Frequency (Hz) :		—
M.3.1.2	Voltage (V) :		—
M.3.1.3	Cadence; time (s), voltage (V) :		—
M.3.1.4	Single fault current (mA) :		—
M.3.2	Tripping device and monitoring voltage :		N
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N
M.3.2.2	Tripping device		N
M.3.2.3	Monitoring voltage (V) :		N

N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N
N.1	ITU-T impulse test generators		N
N.2	IEC 60065 impulse test generator		N

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Clause	Requirement + Test	Result - Remark	Verdict
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N
	a) Preferred climatic categories		N
	b) Maximum continuous voltage		N
	c) Pulse current		N
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N
R.2	Reduced clearances (see 2.10.3)		N
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N
S.1	Test equipment		N
S.2	Test procedure		N
S.3	Examples of waveforms during impulse testing		N
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N
	IP code	IP20	—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N
			—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N
V.1	Introduction		N
V.2	TN power distribution systems		N
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N
W.1	Touch current from electronic circuits		N
W.1.1	Floating circuits		N
W.1.2	Earthed circuits		N
W.2	Interconnection of several equipments		N
W.2.1	Isolation		N
W.2.2	Common return, isolated from earth		N
W.2.3	Common return, connected to protective earth		N

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Clause	Requirement + Test	Result - Remark	Verdict

X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N
X.1	Determination of maximum input current		N
X.2	Overload test procedure		N

Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N
Y.1	Test apparatus		N
Y.2	Mounting of test samples		N
Y.3	Carbon-arc light-exposure apparatus		N
Y.4	Xenon-arc light exposure apparatus		N

Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N
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AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N
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BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
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EN 60950-1:2006 – COMMON MODIFICATIONS						
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations					N
General	Delete all the “country” notes in the reference document according to the following list: 1.4.8 Note 2 1.5.1 Note 2 & 3 1.5.7.1 Note 1.5.8 Note 2 1.5.9.4 Note 1.7.2.1 Note 4, 5 & 6 2.2.3 Note 2.2.4 Note 2.3.2 Note 2.3.2.1 Note 2 2.3.4 Note 2 2.6.3.3 Note 2 & 3 2.7.1 Note 2.10.3.2 Note 2 2.10.5.13 Note 3 3.2.1.1 Note 3.2.4 Note 3. 2.5.1 Note 2 4.3.6 Note 1 & 2 4.7 Note 4 4.7.2.2 Note 4.7.3.1 Note 2 5.1.7.1 Note 3 & 4 5.3.7 Note 1 6 Note 2 & 5 6.1.2.1 Note 2 6.1.2.2 Note 6.2.2 Note 6. 2.2.1 Note 2 6.2.2.2 Note 7.1 Note 3 7.2 Note 7.3 Note 1 & 2 G.2.1 Note 2 Annex H Note 2					N

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Clause	Requirement + Test	Result - Remark	Verdict
1.3.Z1	<p>Add the following subclause:</p> <p>1.3.Z1 Exposure to excessive sound pressure</p> <p>The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones.</p> <p>NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment:</p> <p>Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.</p>		N
1.5.1	<p>Add the following NOTE:</p> <p>NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC</p>		N
1.7.2.1	<p>Add the following NOTE:</p> <p>NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss</p>		N
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		N
2.7.2	This subclause has been declared 'void'.		N
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N

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Clause	Requirement + Test	Result - Remark	Verdict															
3.2.5.1	<p>Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”.</p> <p>In Table 3B, replace the first four lines by the following:</p> <table><tr><td> Up to and including 6</td><td> </td><td>0,75 ^{a)}</td><td> </td></tr><tr><td> Over 6 up to and including 10</td><td> </td><td>(0,75) ^{b)}</td><td>1,0</td></tr><tr><td> </td><td></td><td></td><td></td></tr><tr><td> Over 10 up to and including 16</td><td> </td><td>(1,0) ^{c)}</td><td>1,5</td></tr></table> <p>In the conditions applicable to Table 3B delete the words “in some countries” in condition ^{a)}.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6		0,75 ^{a)}		Over 6 up to and including 10		(0,75) ^{b)}	1,0					Over 10 up to and including 16		(1,0) ^{c)}	1,5	N
Up to and including 6		0,75 ^{a)}																
Over 6 up to and including 10		(0,75) ^{b)}	1,0															
Over 10 up to and including 16		(1,0) ^{c)}	1,5															
3.3.4	<p>In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:</p> <table><tr><td> Over 10 up to and including 16</td><td> </td><td>1,5 to 2,5</td><td> </td><td>1,5 to 4</td></tr><tr><td> </td><td></td><td></td><td></td><td></td></tr></table> <p>Delete the fifth line: conductor sizes for 13 to 16 A.</p>	Over 10 up to and including 16		1,5 to 2,5		1,5 to 4						N						
Over 10 up to and including 16		1,5 to 2,5		1,5 to 4														
4.3.13.6	<p>Add the following NOTE:</p> <p>NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.</p>	N																
Annex H	<p>Replace the last paragraph of this annex by:</p> <p>At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level.</p> <p>Replace the notes as follows:</p> <p>NOTE These values appear in Directive 96/29/Euratom.</p> <p>Delete NOTE 2.</p>	N																
Bibliography	Additional EN standards.	—																


ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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ZB	SPECIAL NATIONAL CONDITIONS	N
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	N
1.5.7.1	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.	N
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	N
1.5.9.4	In Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	N

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Clause	Requirement + Test	Result - Remark	Verdict																								
1.7.2.1	<p>In Finland, Norway and Sweden, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p>		N																								
1.7.5	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.		N																								
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N																								
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N																								
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N																								
2.6.3.3	In the United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.		N																								
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N																								
2.10.5.13	In Finland, Norway and Sweden , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N																								
3.2.1.1	<p>In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <table> <tr> <td>SEV 6532-2.1991</td><td>Plug Type 15</td><td>3P+N+PE</td><td>250/400 V, 10 A</td></tr> <tr> <td>SEV 6533-2.1991</td><td>Plug Type 11</td><td>L+N</td><td>250 V, 10 A</td></tr> <tr> <td>SEV 6534-2.1991</td><td>Plug Type 12</td><td>L+N+PE</td><td>250 V, 10 A</td></tr> </table> <p>In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998:</p> <table> <tr> <td>SEV 5932-2.1998</td><td>Plug Type 25</td><td>3L+N+PE</td><td>230/400 V, 16 A</td></tr> <tr> <td>SEV 5933-2.1998</td><td>Plug Type 21</td><td>L+N</td><td>250 V, 16 A</td></tr> <tr> <td>SEV 5934-2.1998</td><td>Plug Type 23</td><td>L+N+PE</td><td>250 V, 16 A</td></tr> </table>	SEV 6532-2.1991	Plug Type 15	3P+N+PE	250/400 V, 10 A	SEV 6533-2.1991	Plug Type 11	L+N	250 V, 10 A	SEV 6534-2.1991	Plug Type 12	L+N+PE	250 V, 10 A	SEV 5932-2.1998	Plug Type 25	3L+N+PE	230/400 V, 16 A	SEV 5933-2.1998	Plug Type 21	L+N	250 V, 16 A	SEV 5934-2.1998	Plug Type 23	L+N+PE	250 V, 16 A		N
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Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>		N
3.2.1.1	<p>In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N
3.2.1.1	<p>In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N
3.2.1.1	<p>In Ireland, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.</p>		N
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N
3.3.4	<p>In the United Kingdom, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is:</p> <ul style="list-style-type: none"> • 1,25 mm² to 1,5 mm² nominal cross-sectional area. 		N
4.3.6	<p>In the United Kingdom, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.</p>		N
4.3.6	<p>In Ireland, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.</p>		N

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<p>In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> ◦ is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and ◦ has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and ◦ is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT. 		N
6.1.2.1	<p>In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400. 		N

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Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.2	In Finland, Norway and Sweden , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N
7.2	In Finland, Norway and Sweden , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N
7.3	In Norway and Sweden , there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.		N
7.3	In Norway , for installation conditions see EN 60728-11:2005.		N
ZC	A-DEVIATIONS (informative)		N
1.5.1	Sweden (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.		N
1.5.1	Switzerland (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.		N
1.7.2.1	Denmark (Heavy Current Regulations) Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text: Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket eller  If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: "For tilslutning af de øvrige ledere, se medfølgende installationsvejledning."		N
1.7.2.1	Germany (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2). If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.		N

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Clause	Requirement + Test	Result - Remark	Verdict
1.7.5	Denmark (Heavy Current Regulations) With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.		N
1.7.13	Switzerland (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries) Annex 2.15 of SR 814.81 applies for batteries.		N
5.1.7.1	Denmark (Heavy Current Regulations, Chapter 707, clause 707.4) TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.		N

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾	
Enclosure	Various	Various	HB, 60	UL746	UL	
PCB	Various	Various	94V-1,105	UL796	UL	
Battery	Various	Various	non- rechargeable AA Size 1.5V	---	Test with EN60950- 1:2006	
1) An asterisk indicates a mark which assures the agreed level of surveillance						
Supplementary information:						

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
DC6.0V	0.0008	---	0.0048	---	---	Base: Ringing continued and supplied by new full replaceable batteries.	
Supplementary information:							

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Base PWB to accessible part	120	120	1.0	>1.0	1.5	>1.5	

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:						

2.10.5	TABLE: Distance through insulation measurements					N
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Supplementary information:						

4.3.8	TABLE: Batteries								P
The tests of 4.3.8 are applicable only when appropriate battery data is not available					---				P
Is it possible to install the battery in a reverse polarity position?					No hazard				P
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. Current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	0.8mA	---	0	---	---	---	---	---	---
Max. current during fault condition	1 mA	---	0	---	---	---	---	---	---
Max. current after overcharging for 7 hours	---	---	---	---	---	---	---	---	---
Test results:									Verdict
- Chemical leaks									P
- Explosion of the battery									P
- Emission of flame or expulsion of molten metal									P
- Electric strength tests of equipment after completion of tests									P
Supplementary information:									

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements						P
	Supply voltage (V)	A)DC Base 6.0V	DC Base 6.0V	---	---	---	---
	Ambient T_{min} (°C)	24.3	---	---	---	---	---
	Ambient T_{max} (°C)	25.1	Shift to Tma	---	---	---	---
Maximum measured temperature T of part/at::		T (°C)					Allow ed T_{max} (°C)
Ambient		24.3	50.0	---	---	---	---
Key panel PCB		25.5	51.2	---	---	---	105
Single small PCB		25.7	51.4	---	---	---	105
Battery surface		25.0	50.7	---	---	---	70
Enclosure above of the Batteries		24.9	50.6	---	---	---	60
LCD surface		25.7	51.4	---	---	---	80
Handset enclosure		25.4	51.1	---	---	---	60
Key		25.6	51.3	---	---	---	60
Supplementary information:							
1. Tma is temperature 50							
2. A) Ringing continued and discharging with four new full batteries.							
Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allo wed T_{max} (°C)	Insula tion class
Supplementary information:							

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N
	Allowed impression diameter (mm) :	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

4.7	TABLE: Resistance to fire					N
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
TNV-3 to base unit		AC	1000	No
TNV-3 to handset unit		AC	1500	No
Supplementary information:				

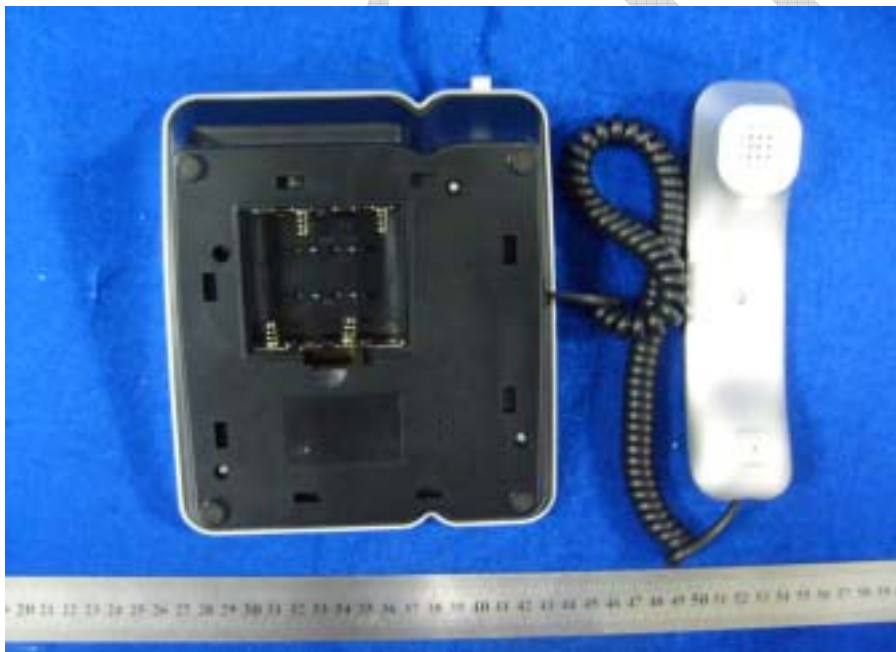
5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)			25.6		—
	Power source for EUT: Manufacturer, model/type, output rating			See appended table1.5.1		—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Battery	Reverse polarity	6V DC	7 hours	---	---	NHT,NCD,NFG
commutating Diode at D9	Short circuit	TNV-3 circuit supplied	1 min	---	---	NHT,NCD,NFG
Supplementary information:						
NHT: No High Temperature; NCD: No Component Damage;NFG no flamability gas.						

Appendix A EUT PHOTOS

A.1 EUT-Whole View



A.2 EUT-Handset Rear View of Opening the Battery Enclosure



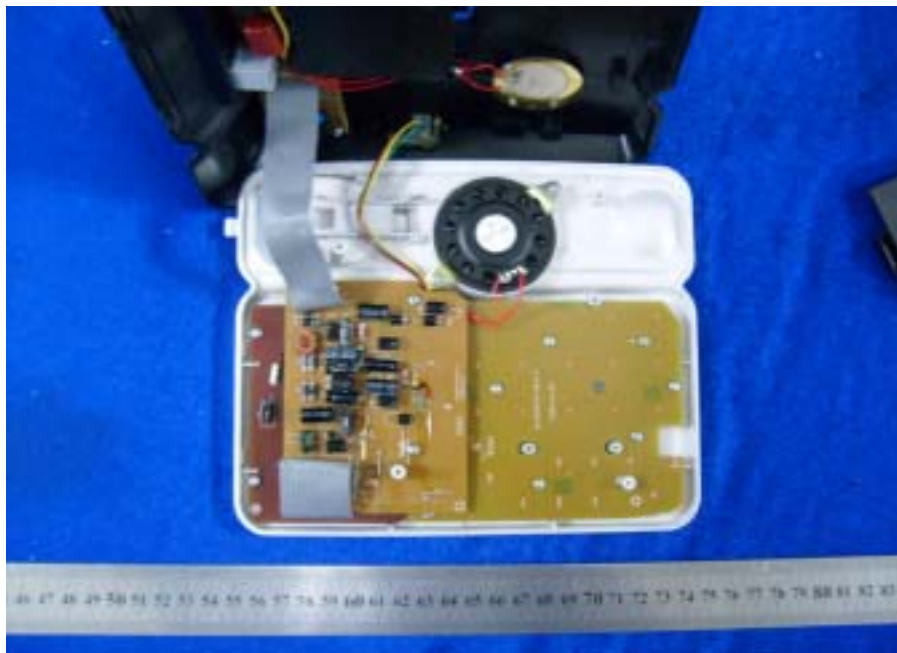
A.3 EUT-RJ11 Port View



A.4 EUT-Side View



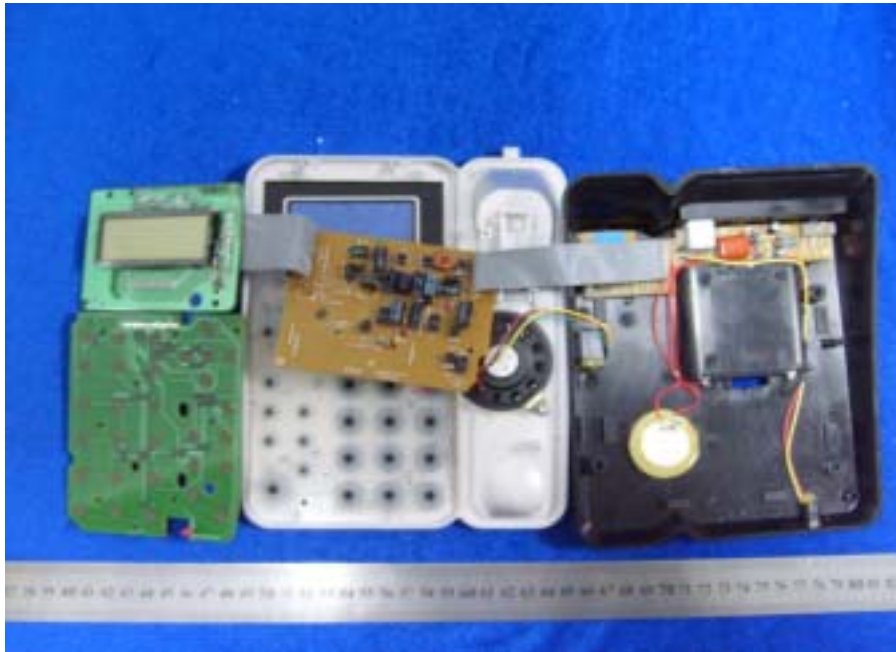
A.5 EUT-Base PCB View 1



A.6 EUT-Base PCB View 2



A.7 EUT-Base PCB View 3



APPENDIX B – USER’S MANUAL

**APPENDIX C- SCH & PCB&BOM
&ELECTRICAL DISCHAGING TUBE SPEC
&LCD SPEC**

APPENDIX D -TEST EQUIPMENT LIST